

Mono-n-octyl phthalate

CAS No. 5393-19-1

Metabolite of dioctyl phthalate (CAS No. 117-84-0)

Dioctyl phthalate is used primarily to produce flexible plastics. People exposed to dioctyl phthalate will excrete mono-n-octyl phthalate in their urine. The amount of mono-n-octyl phthalate is an indicator of how much contact with dioctyl phthalate has occurred.

Workplace air standards for external exposure are established (OSHA) for dioctyl phthalate. Generally, dioctyl phthalate has low acute toxicity. It has not been completely classified with respect to its carcinogenicity

(U.S. EPA, IARC, NTP). Information on external exposure and health effects is available from ATSDR at <http://www.atsdr.cdc.gov/toxprofiles>.

Concentrations documented in this *Report* are close to the detection limit. In a previous study of a non-random subsample from NHANES III, Blount et al. (2000) also demonstrated a low detection rate (0.9 µg/L detection limit) and 95th percentile levels similar to this *Report*.

Table 72. Mono-n-octyl phthalate

Geometric mean and selected percentiles of urine concentrations (in µg/L) for the U.S. population aged 6 years and older, National Health and Nutrition Examination Survey, 1999-2000.

	Geometric mean (95% conf. interval)	Selected percentiles (95% confidence interval)						Sample size
		10th	25th	50th	75th	90th	95th	
Total, age 6 and older	*	< LOD	< LOD	< LOD	< LOD	1.60 (1.20-2.10)	2.90 (2.20-3.40)	2541
Age group								
6-11 years	*	< LOD	< LOD	< LOD	< LOD	2.00 (1.10-2.90)	3.20 (2.00-4.10)	328
12-19 years	*	< LOD	< LOD	< LOD	< LOD	1.60 (.900-2.40)	2.80 (2.20-3.70)	752
20 years and older	*	< LOD	< LOD	< LOD	< LOD	1.50 (1.10-2.00)	2.90 (1.90-3.50)	1461
Gender								
Males	*	< LOD	< LOD	< LOD	< LOD	1.60 (1.10-2.00)	2.80 (2.10-3.40)	1215
Females	*	< LOD	< LOD	< LOD	< LOD	1.40 (.900-2.20)	3.10 (2.10-3.70)	1326
Race/ethnicity								
Mexican Americans	*	< LOD	< LOD	< LOD	< LOD	1.00 (<LOD-1.40)	1.50 (1.20-3.30)	814
Non-Hispanic blacks	*	< LOD	< LOD	< LOD	< LOD	1.80 (1.00-2.80)	3.00 (2.20-3.70)	603
Non-Hispanic whites	*	< LOD	< LOD	< LOD	< LOD	1.50 (1.00-2.40)	3.00 (2.20-3.60)	911

< LOD means less than the limit of detection, which is 0.9 µg/L.

* Not calculated. Proportion of results below limit of detection was too high to provide a valid result.

Table 73. Mono-n-octyl phthalate (creatinine adjusted)

Geometric mean and selected percentiles of urine concentrations (in µg/gram of creatinine) for the U.S. population aged 6 years and older, National Health and Nutrition Examination Survey, 1999-2000.

	Geometric mean (95% conf. interval)	Selected percentiles (95% confidence interval)						Sample size
		10th	25th	50th	75th	90th	95th	
Total, age 6 and older	*	< LOD	< LOD	< LOD	< LOD	2.40 (2.00-2.73)	3.51 (3.00-4.00)	2541
Age group								
6-11 years	*	< LOD	< LOD	< LOD	< LOD	2.22 (1.54-3.75)	3.75 (1.90-10.3)	328
12-19 years	*	< LOD	< LOD	< LOD	< LOD	1.49 (1.30-1.69)	1.82 (1.58-3.00)	752
20 years and older	*	< LOD	< LOD	< LOD	< LOD	2.56 (2.07-2.86)	3.47 (3.08-4.00)	1461
Gender								
Males	*	< LOD	< LOD	< LOD	< LOD	1.82 (1.54-2.05)	2.52 (2.00-3.16)	1215
Females	*	< LOD	< LOD	< LOD	< LOD	2.95 (2.50-3.60)	4.00 (3.42-5.37)	1326
Race/ethnicity								
Mexican Americans	*	< LOD	< LOD	< LOD	< LOD	1.82 (1.46-2.61)	3.16 (2.86-3.94)	814
Non-Hispanic blacks	*	< LOD	< LOD	< LOD	< LOD	1.36 (1.05-1.88)	2.18 (1.43-3.42)	603
Non-Hispanic whites	*	< LOD	< LOD	< LOD	< LOD	2.60 (2.07-3.08)	3.60 (3.16-4.49)	911

< LOD means less than the limit of detection (see previous table).

* Not calculated. Proportion of results below limit of detection was too high to provide a valid result.